

| Output rank | Input rank | Income | Region | Population (mn) | GDP, PPP\$ | GDP per capita, PPP\$ | GII 2018 rank |
|--|--|-------------|-------------|--|---|-----------------------|---------------|
| 32 | 18 | High | SEAO | 4.7 | 199.3 | 40,135.4 | 22 |
| INSTITUTIONS 92.1 5 ● | | | | BUSINESS SOPHISTICATION 41.4 31 ◇ | | | |
| 1.1 | Political environment | 91.7 | 7 ● | 5.1 | Knowledge workers | 43.8 | [48] |
| 1.1.1 | Political and operational stability* | 96.5 | 2 ●◆ | 5.1.1 | Knowledge-intensive employment, % | n/a | n/a |
| 1.1.2 | Government effectiveness* | 89.4 | 10 ● | 5.1.2 | Firms offering formal training, % firms | n/a | n/a |
| 1.2 | Regulatory environment | 98.8 | 1 ● | 5.1.3 | GERD performed by business, % GDP | 0.6 | 33 ◇ |
| 1.2.1 | Regulatory quality* | 98.0 | 3 ●◆ | 5.1.4 | GERD financed by business, % | 43.8 | 38 |
| 1.2.2 | Rule of law* | 97.2 | 5 ● | 5.1.5 | Females employed w/advanced degrees, % | 19.5 | 25 |
| 1.2.3 | Cost of redundancy dismissal, salary weeks | 8.0 | 1 ● | 5.2 | Innovation linkages | 40.2 | 28 |
| 1.3 | Business environment | 85.9 | 18 | 5.2.1 | University/industry research collaboration* | 62.7 | 21 |
| 1.3.1 | Ease of starting a business* | 100.0 | 1 ●◆ | 5.2.2 | State of cluster development* | 55.2 | 35 ◇ |
| 1.3.2 | Ease of resolving insolvency* | 71.8 | 29 | 5.2.3 | GERD financed by abroad, % | 7.8 | 50 ○ |
| HUMAN CAPITAL & RESEARCH | 52.6 | 16 | 5.3 | Knowledge absorption | 40.0 | 41 | ◇ |
| 2.1 | Education | 63.0 | 15 | 5.3.1 | Intellectual property payments, % total trade | 1.7 | 17 |
| 2.1.1 | Expenditure on education, % GDP | 6.3 | 17 | 5.3.2 | High-tech imports, % total trade | 10.0 | 29 |
| 2.1.2 | Government funding/pupil, secondary, % GDP/cap | 20.8 | 47 | 5.3.3 | ICT services imports, % total trade | 1.4 | 49 |
| 2.1.3 | School life expectancy, years | 18.8 | 7 ● | 5.3.4 | FDI net inflows, % GDP | 0.7 | 115 ○ |
| 2.1.4 | PISA scales in reading, maths, & science | 505.9 | 14 | 5.3.5 | Research talent, % in business enterprise | 36.9 | 36 ◇ |
| 2.1.5 | Pupil-teacher ratio, secondary | 13.6 | 61 ○ | KNOWLEDGE & TECHNOLOGY OUTPUTS | 29.8 | 42 | ◇ |
| 2.2 | Tertiary education | 51.3 | 12 | 6.1 | Knowledge creation | 39.1 | 20 |
| 2.2.1 | Tertiary enrolment, % gross | 82.0 | 15 | 6.1.1 | Patents by origin/bn PPP\$ GDP | 5.4 | 22 |
| 2.2.2 | Graduates in science & engineering, % | 21.2 | 56 ○ | 6.1.2 | PCT patents by origin/bn PPP\$ GDP | 1.4 | 24 ◇ |
| 2.2.3 | Tertiary inbound mobility, % | 19.8 | 5 ●◆ | 6.1.3 | Utility models by origin/bn PPP\$ GDP | n/a | n/a |
| 2.3 | Research & development (R&D) | 43.4 | 23 | 6.1.4 | Scientific & technical articles/bn PPP\$ GDP | 26.4 | 11 |
| 2.3.1 | Researchers, FTE/mn pop. | 4,052.4 | 24 | 6.1.5 | Citable documents H-index | 33.9 | 27 |
| 2.3.2 | Gross expenditure on R&D, % GDP | 1.2 | 30 ◇ | 6.2 | Knowledge impact | 36.8 | 63 |
| 2.3.3 | Global R&D companies, avg. exp. top 3, mn US\$ | 47.8 | 32 | 6.2.1 | Growth rate of PPP\$ GDP/worker, % | -0.6 | 100 ○◇ |
| 2.3.4 | QS university ranking, average score top 3* | 50.1 | 18 | 6.2.2 | New businesses/th pop. 15-64 | 14.5 | 9 |
| INFRASTRUCTURE | 60.9 | 20 | 3.1 | Information & communication technologies (ICTs) | 90.5 | 6 | ● |
| 3.1 | Information & communication technologies (ICTs) | 90.5 | 6 | 3.1.1 | ICT access* | 86.2 | 12 |
| 3.1.1 | ICT access* | 86.2 | 12 | 3.1.2 | ICT use* | 82.3 | 11 |
| 3.1.2 | ICT use* | 82.3 | 11 | 3.1.3 | Government's online service* | 95.1 | 9 |
| 3.1.3 | Government's online service* | 95.1 | 9 | 3.1.4 | E-participation* | 98.3 | 5 ● |
| 3.1.4 | E-participation* | 98.3 | 5 ● | 3.2 | General infrastructure | 50.4 | 18 |
| 3.2 | General infrastructure | 50.4 | 18 | 3.2.1 | Electricity output, kWh/mn pop. | 8,935.3 | 18 |
| 3.2.1 | Electricity output, kWh/mn pop. | 8,935.3 | 18 | 3.2.2 | Logistics performance* | 84.8 | 15 |
| 3.2.2 | Logistics performance* | 84.8 | 15 | 3.2.3 | Gross capital formation, % GDP | 25.4 | 43 |
| 3.2.3 | Gross capital formation, % GDP | 25.4 | 43 | 3.3 | Ecological sustainability | 41.8 | 49 |
| 3.3 | Ecological sustainability | 41.8 | 49 | 3.3.1 | GDP/unit of energy use | 7.9 | 77 ○ |
| 3.3.1 | GDP/unit of energy use | 7.9 | 77 ○ | 3.3.2 | Environmental performance* | 76.0 | 17 |
| 3.3.2 | Environmental performance* | 76.0 | 17 | 3.3.3 | ISO 14001 environmental certificates/bn PPP\$ GDP | 1.5 | 57 |
| 3.3.3 | ISO 14001 environmental certificates/bn PPP\$ GDP | 1.5 | 57 | MARKET SOPHISTICATION | 68.5 | 6 | ● |
| 4.1 | Credit | 87.2 | 3 ●◆ | 7.1 | Intangible assets | 53.4 | 27 |
| 4.1.1 | Ease of getting credit* | 100.0 | 1 ●◆ | 7.1.1 | Trademarks by origin/bn PPP\$ GDP | 90.5 | 22 |
| 4.1.2 | Domestic credit to private sector, % GDP | 152.9 | 8 ● | 7.1.2 | Industrial designs by origin/bn PPP\$ GDP | 1.8 | 54 |
| 4.1.3 | Microfinance gross loans, % GDP | n/a | n/a | 7.1.3 | ICTs & business model creation* | 73.5 | 23 |
| 4.2 | Investment | 51.5 | 36 | 7.1.4 | ICTs & organizational model creation* | 71.3 | 18 |
| 4.2.1 | Ease of protecting minority investors* | 81.7 | 2 ●◆ | 7.2 | Creative goods & services | 24.8 | 43 |
| 4.2.2 | Market capitalization, % GDP | 43.4 | 33 ◇ | 7.2.1 | Cultural & creative services exports, % total trade | 0.5 | 52 |
| 4.2.3 | Venture capital deals/bn PPP\$ GDP | 0.1 | 18 | 7.2.2 | National feature films/mn pop. 15-69 | 6.2 | 36 |
| 4.3 | Trade, competition, & market scale | 66.7 | 46 | 7.2.3 | Entertainment & Media market/th pop. 15-69 | 59.0 | 11 |
| 4.3.1 | Applied tariff rate, weighted avg., % | 1.4 | 13 | 7.2.4 | Printing & other media, % manufacturing | 1.8 | 23 |
| 4.3.2 | Intensity of local competition* | 70.8 | 52 | 7.2.5 | Creative goods exports, % total trade | 0.5 | 61 |
| 4.3.3 | Domestic market scale, bn PPP\$ | 199.3 | 61 | 7.3 | Online creativity | 37.1 | 21 |
| | | | | 7.3.1 | Generic top-level domains (TLDs)/th pop. 15-69 | 32.5 | 20 |
| | | | | 7.3.2 | Country-code TLDs/th pop. 15-69 | 59.7 | 10 ● |
| | | | | 7.3.3 | Wikipedia edits/mn pop. 15-69 | 59.7 | 16 |
| | | | | 7.3.4 | Mobile app creation/bn PPP\$ GDP | 15.9 | 31 |

NOTES: ● indicates a strength; ○ a weakness; ◆ a strength relative to the other top 25-ranked GII economies; ◇ a weakness relative to the other top 25-ranked GII economies; * an index; † a survey question. ⊕ indicates that the economy's data are older than the base year; see Appendix II for details, including the year of the data, at <http://globalinnovationindex.org>. Square brackets [] indicate that the data minimum coverage (DMC) requirements were not met at the sub-pillar or pillar level.